

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Modifications of Part 2 and 15 of the)	ET Docket No. 03-201
Commission's Rules for Unlicensed Devices)	
and Equipment Approval)	

COMMENTS OF WORKS D'ARNDT

This wireless consulting company hereby submits its reply comments in response to the Commission's *Notice of Proposed Rulemaking* ("*NPRM*") in the above-captioned proceeding.¹

I. INTRODUCTION.

Works d'Arndt provides high quality wireless consultation and assistance worldwide. With over 20 years of exclusive work in the unlicensed bands, I have worked for or have provided unique solutions to wireless issues and problems. Also, I have provided Comments directly to the FCC or co-authored Comments as an employee of Western Multiplex and NextWeb. The following is a personal observation of the use of external amplifiers and suggestions that would help alleviate some of the gross misuses of these products.

The Commission's proposals, as they stand without more emphasis on their use and practical wireless installations, will be self-defeating as they will promote interference in the license-exempt bands with no benefit to the public or the wireless industry in the long term.

¹ FCC 03-223 (rel. Nov. 18, 2003).

II. DISCUSSION.

A. The Higher Gain Permitted for Point-to-Point Operations in the License-Exempt 2.4 GHz Band.

I support the Commission's proposals to permit advanced antenna designs such as sectorized antennas and phased antennas to take advantage of the higher antenna gain permitted for point-to-point operations in the license-exempt 2400-2483.5 MHz band. The Commission correctly observes that its rulings on this issue thus far have been limited to informal staff rulings that are not easily accessible to the public, and that formal clarification in the rules is necessary to ensure that all vendors and users of new antenna technologies in the license-exempt bands are clear as to when they may use the –higher antenna gain permitted for point-to-point operations.

The Commission does need to clearly define what point-to-point is and close the loop holes and therefore the abuses to the Rulings.

B. DO NOT Permit Separate Marketing of Amplifiers Not Certified As Part of a "System" unless certain printed words are clearly viewable at all times to the installer.

I agree that license-exempt broadband providers would benefit from more flexible Commission rules that permit them more freedom to "mix and match" antennas with certified systems as necessary to accommodate the need to communicate wirelessly. The problem is the misuse and the term "professional installer" as most of the 2.4 GHz band installations is just an extension of installing something from the local electronics store. The idea that the reverse connectors provided a "technical" way to divide those with experience and those that do not, is NOT working. It is very simple with the Internet to search and find many companies willing to sell, without question, reverse polarity connectors and pigtails overnight. I have also seen installations where an amplifier was used not only with a too high of gain antenna, but because RG58 (even RG59!) was used for coax. The worst was TWO amplifiers back to back using the

stub omni removed from the radio! Obviously NOT installed by a “professional installer,” but is more the norm today with the easy and cheap availability of 2.4 GHz band products and “work-arounds” offered in the marketplace. I know that without some form of mandatory classes or the necessity to understand the ramifications of making erroneous wireless system decisions, this problem will only get worse. I do not see, even if the FCC decides NOT to promote amplifiers not combined with a system, that the devices WILL be misused to the detriment of the industry and to the very future of these cherished unlicensed bands (a reason why the scream for more new bands?).

A possible suggestion (that serves the purpose of making the point) is the mandatory addition of additional words on the warning label that comes with each antenna. It is the printed value of that particular antenna’s gain and the same for the amplifier and that each device say that the addition of the gain of the antenna and the gain of the amplifier must not exceed XX or is in violation of FCC Rules. Also, that the use of such amplifiers be used with a minimum standard of coax and length for 2.4GHz (specifically the same basic minimum with other frequencies) so that in the end, the use of the amplifier is not for the purpose of trying to solve a BAD system design which is all too common.

C. The Commission Should Eliminate the Ongoing Confusion About Professional Installation by Including a Clear Definition of “Professional Installer” in its Rules.

I cannot emphasize this loophole enough as this will help to alleviate a lot of the issues in Discussion Points A and B as stated in these Comments. This also has to extend to the SELLERS and the MARKETEERS of those components that are applicable to these discussions in this NPRM.

III. CONCLUSION.

Works d'Arndt looks forward to working with the Commission to achieve the agency's goals in this proceeding and wish the continued success to bring more solutions for the advancement of moving more data with wireless.

Respectfully submitted,

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s/_____

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